

Claims 42 and 43

Claim 42 defines a dental unit comprising, among other features, “means for *detecting the reaction between the biofilm and the fluid reagent*, at least on the surfaces of a conduit portion of one of the conduits.” Similarly, claim 43 defines a dental unit comprising, “(ii) means for introducing the fluid reagent into the fluid conduits so that said fluid reagent reacts with biofilm adhering to the inside surface of the fluid conduits; and, (iii) *means for detecting a change in a property of the biofilm adhering to the inside surfaces of the fluid conduits caused by a reaction between said biofilm adhering to the inside surfaces and the fluid reagent.*”

In the final Office Action, the Examiner acknowledges that neither Banks, Siebel nor Fitton disclose a dental unit comprising structure for introducing a reagent to react with the biofilm. Because of the defects in Banks, Siebel and Fitton, the Examiner relies on Tuompo. Specifically, the Examiner points to col. 2, lines 11-42 of Tuompo wherein Tuompo discloses general use of dye to study the structure/thickness of biofilm.

It is respectfully submitted that the Examiner’s rejection is improper for at least the following reasons:

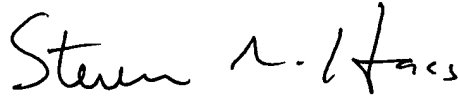
1. Neither Banks nor Siebel teach or fairly suggest means for detecting a reaction between the biofilm and a fluid reagent. Both Banks and Siebel discloses only means to detect the biofilm.
2. Fitton discloses an apparatus for periodically disinfecting water lines of a dental unit. Nothing in Fitton discloses or fairly suggests monitoring the water lines for the presence of biofilm; Fitton *presumes* the existence of the biofilm and/or doesn’t care if a biofilm is present or not, and simply relies upon periodic disinfection to counteract same if any biofilm happens to be present. In this regard, Fitton teaches directly away from the claims of the present application where the dental unit comprises the noted structures for monitoring the water lines for the presence of biofilm by way of a reaction between the biofilm and a reagent.

3. Tuompo is unrelated to dental units and Tuompo does not disclose any structure whatsoever including means for introducing a reagent and/or means for detecting a reaction between a reagent and a biofilm.
4. Like Fitton, Tuompo presumes the presence of biofilm and does not monitor for same. Tuompo is completely unrelated to detecting the presence of a biofilm and is simply related to a method and apparatus for taking microbial samples for purposes of studying same, with dye or otherwise.
5. There is no disclosure in Tuompo of any means for introducing a reagent and means for detecting a reaction between the reagent and the biofilm in the context of a dental unit. The general disclosure of use of a dye to study the structure of a biofilm does not render obvious a dental unit including the structures recited in claims 42 and 43.

Separately from the distinctions noted above, it is further noted that the claims of the present application are specifically directed to a dental unit, and more specifically directed to a dental unit comprising both means for introducing a reagent and means for detecting a reaction between the reagent and any biofilm that is present. The Examiner's proposed combination of references does not lead to the claimed apparatus. Only Fitton relates specifically to a dental apparatus and, as noted, it teaches away from the applicant's claimed invention. A person of ordinary skill in the art, upon reading Fitton, would have no motivation to develop a dental unit including means for introducing a reagent and means for detecting a reaction between the reagent and any biofilm for the purpose of detecting possible presence of a biofilm. As noted, Fitton presumes the presence of biofilm and periodically removes same. It is respectfully submitted that all motivation to combine the references comes solely from the present disclosure and with the benefit of hindsight. Even still, the Examiner has been forced to "pick and choose" from multiple documents in an effort to show that applicant's claimed dental unit "would have been obvious." As such, it is respectfully submitted that this

application meets all statutory requirements. A Notice of Allowance is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steven M. Haas". The signature is written in a cursive, flowing style.

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